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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,274	01/20/2006	Fumio Okuda	28955.4041	7641

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EXAMINER	
NGUYEN, KHIEM D	
ART UNIT	PAPER NUMBER
2823	
MAIL DATE	DELIVERY MODE
08/21/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,274	OKUDA ET AL.	
	Examiner	Art Unit	
	KHIEM D. NGUYEN	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/09/2008, 08/11/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. It is noted that the Ma et al. reference (U.S. Patent 6,687,266) was published on February 03rd, 2004, less than one year before the July 21st, 2004 PCT filing date of this application. Therefore, the Examiner has changed the ground of rejection to 35 U.S.C. 102(e). The previous rejection in Paper No. 20080209 mailed on February 14th, 2008 has been withdrawn. Claims 1-8 are pending in the application.

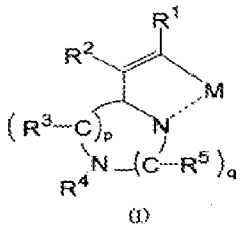
Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8 rejected under 35 U.S.C. 102(e) as being anticipated by Ma et al. (U.S. Patent 6,687,266).

In re claim 1, **Ma et al.** disclose a metal complex compound having a partial structure represented by a following general formula (I):



(I)

wherein R^1 to R^5 each independently represents a hydrogen atom, a cyano group, a nitro group, a halogen atom, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms, a substituted or unsubstituted amino group, a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, a substituted or unsubstituted alkylsilyl group having 1 to 20 carbon atoms, a substituted or unsubstituted acyl group having 1 to 20 carbon atoms or a substituted or unsubstituted aromatic group having 1 to 30 carbon atoms (see col. 11, line 9 to col. 12, line 65 and Table 1 in cols. 15-18); and

TABLE 1

Cmp	M	R_2	R_3	R_4	R_5	R'	Y	R'2	R'4	X	C.I.E ($MeCl_2$)	PL (nm)
1	Ir	H	H	H	H	CH_3	C	H	H	acac	0.32, 0.60	509
2	Ir	F	H	F	H	CH_3	C	H	H	pic	0.25, 0.48	476
3	Ir	H	H	OCH_3	H	CH_3	C	H	H	acac	0.23, 0.53	488
4	Ir	H	H	CF_3	H	CH_3	C	H	H	pic	0.34, 0.59	510
5	Ir	H	CF_3	H	H	H	C	H	H	pic	0.28, 0.55	490
6	Ir	H	H	H	H	C_6H_5	C	H	CF_3	acac	0.37, 0.60	522
7	Ir	H	H	OCH_3	H	CH_3	C	H	H	tris	0.25, 0.54	488
8	Ir	H	H	$N(CH_3)2$	H	C_6H_5	C	H	H	acac	0.35, 0.60	519
9	Ir	H	H	CF_3	H	C_6H_5	N	H	H	acac	0.54, 0.45	584
10	Ir	H	H	H	H	$pOCH_2$ Ph	C	H	H	acac	0.36, 0.60	515
11	Ir	Cl	Cl	H	Cl	C_6H_{35}	C	H	OCH_3	acac	0.50, 0.49	580
12	Ir	OCH_3	H	OCH_3	H	CH_3	C	H	H	acac	0.33, 0.53	494
13	Ir	F	F	F	H	CH_3	C	H	H	acac	0.28, 0.55	490
14	Ir	F	F	F	H	CH_3	C	H	H	pic	0.28, 0.55	488
15	Ir	Cl	Cl	H	Cl	CH_3	C	H	H	acac	0.26, 0.47	470
16	Ir	H	CF_3	F	H	CH_3	C	H	H	acac	0.27, 0.53	485
17	Ir	H	CF_3	F	H	CH_3	C	H	H	pic	0.24, 0.46	474
18	Ir	H	F	OCH_3	H	CH_3	C	H	H	acac	0.29, 0.52	486
19	Ir	H	Dioxolene ring		H	CH_3	C	H	H	acac	0.35, 0.54	522

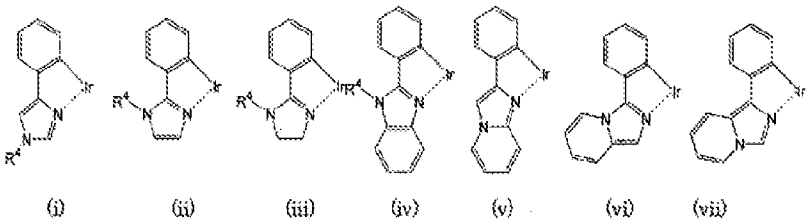
TABLE 1-continued

Cmp	M	R_2	R_3	R_4	R_5	R'	Y	R'2	R'4	X	C.I.E ($MeCl_2$)	PL (nm)
20	Ir	H	CF_3	H	CF_3	CH_3	C	H	H	acac	0.36, 0.56	490
21	Ir	H	CF_3	H	CF_3	CH_3	C	H	H	pic	0.36, 0.56	488
22	Ir	H	H	OCF_3	H	CH_3	C	H	H	acac	0.32, 0.58	500
23	Ir	H	H	OCF_3	H	CH_3	C	H	H	pic	0.27, 0.54	486
24	Ir	CF_3	H	CF_3	H	CH_3	C	H	H	acac	0.55, 0.45	580
25	Ir	F	F	F	F	CH_3	C	H	H	acac	0.32, 0.58	496
26	Pt	H	H	H	H	CH_3	C	H	H	acac	0.31, 0.56	486
27	Pt	F	H	F	H	CH_3	C	H	H	acac	0.28, 0.52	479
28	Ir	H	H	H	H	CH_2CH_2-R'	C	CH_2CH_2-R'	H	acac	0.33, 0.60	508

a couple of R^1 and R^2, a couple of R^2 and R^3, a couple of R^3 and R^4 and a couple of R^4 and R^5 may bond each other to form a ring structure (see col. 11, lines 33-43); **p** and **q** each independently represents an integer of 0 to 3; **p** + **q** being 2 or 3; further, when **p** is an integer of 2 or greater, the plurality of R^3 may bond each other to form a ring structure; when q is an integer of 2 or greater, the plurality of R^5 may bond each other to form a ring structure, with the provisos that when p is 0 and q is 2, the plurality of R^5 do not bond to each other to form a ring structure and when p is 0, q is 2, and R^1 and R_2 bond to each other to form a ring structure, the ring structure is not substituted with phenyl (see Table 1 in cols. 15-18); and M represents metal atom selected from iridium (Ir) atom, rhodium (Rh) atom, platinum (Pt) atom or palladium (Pd) atom (see col. 9, lines 39-46 and Table 1 in cols. 15-18).

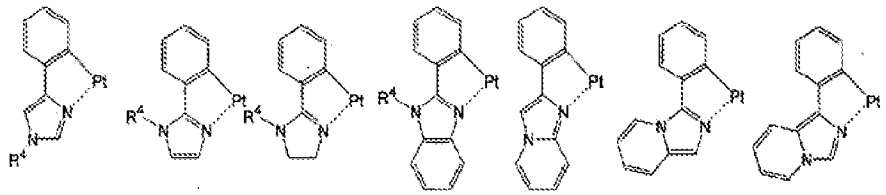
In re claim 2, as applied to claim 1 above, **Ma et al.** disclose all claimed limitations including the limitation wherein the metal complex compound is a material for an light emitting element (see col. 3, lines 17-30).

In re claim 3, as applied to claim 1 above, **Ma et al.** disclose all claimed limitations including the limitation wherein said partial structure is represented by any one of following general formulae (I) to (iii) and (v) to (vii):



wherein R^4 represents the same as the above description (see col. 9, lines 39-62).

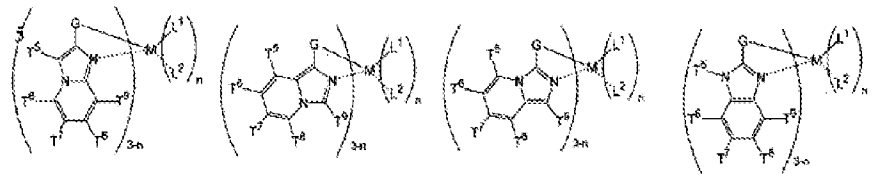
In re claim 4, as applied to claim 1 above, **Ma et al.** disclose all claimed limitations including the limitation wherein said partial structure is represented by any one of following general formulae (i') to (iii') and (v') to (vii'):



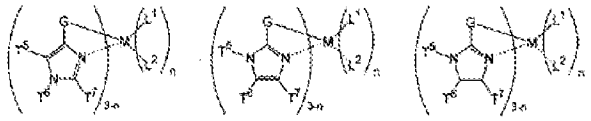
(i') (ii') (iii') (iv') (v') (vi') (vii')

wherein R^4 represents the same as the above description (see col. 9, lines 39-62).

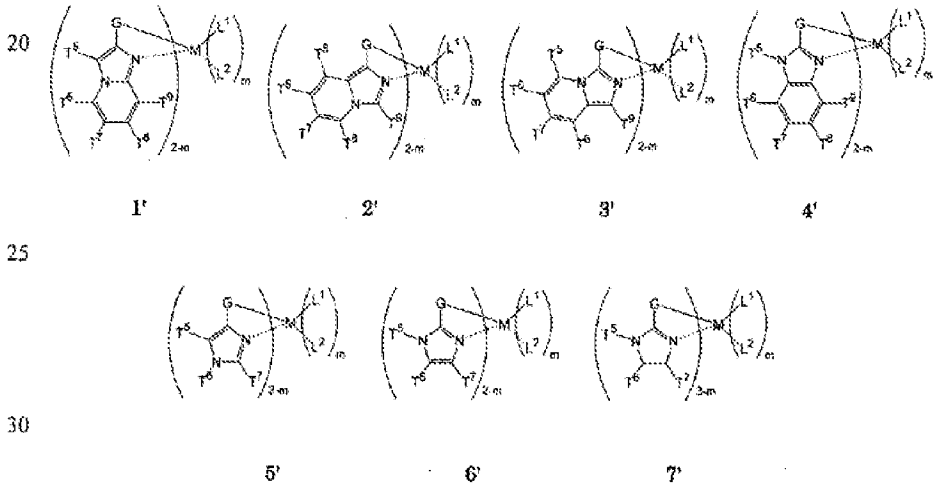
In re claim 5, as applied to claim 1 above, **Ma et al.** disclose all claimed limitations including the limitation wherein the metal complex compound is represented by any one of the following general formulae 1 to 3, 5 to 7, 1' to 3' and 5' to 7':



1 2 3 4



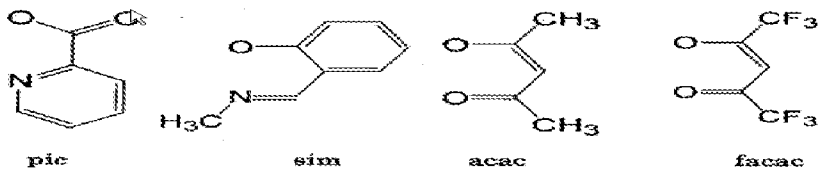
5 6 7



1' 2' 3' 4'

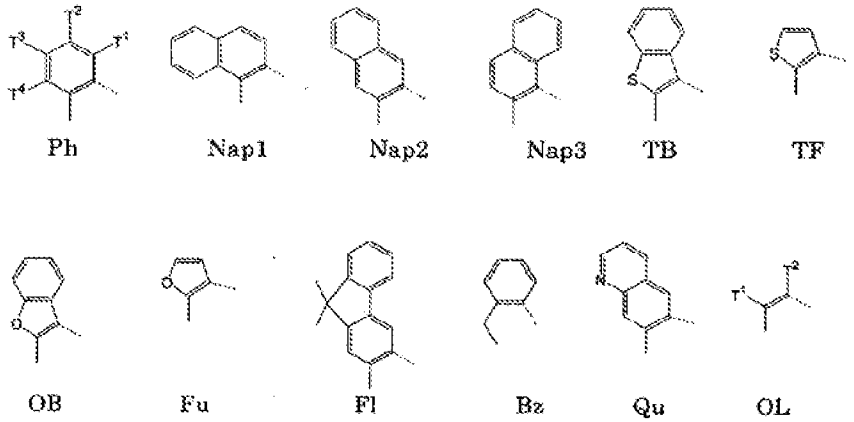
5' 6' 7'

wherein T^5 to T^9 each independently represents a hydrogen atom, a cyano group, a nitro group, a halogen atom, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms, a substituted or unsubstituted amino group, a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, a substituted or unsubstituted alkylsilyl group having 1 to 20 carbon atoms, a substituted or unsubstituted acyl group having 1 to 20 carbon atoms or a substituted or unsubstituted aromatic group having 1 to 30 carbon atoms; and a couple of T^5 and T^6, a couple of T^6 and T^7, a couple of T^7 and T^8 and a couple of T^8 and T^9 may bond each other to form a ring structure; M represents any one metal atom selected from iridium (Ir) atom, rhodium (Rh) atom, platinum (Pt) atom or palladium (Pd) atom; and L^1 and L^2 each independently represents any one structure expressed by following structures:



pic sim acac facac

n represents an integer of 0 to 2, and m represents an integer of 0 or 1. **G** represents any one structure represented by the following structures:

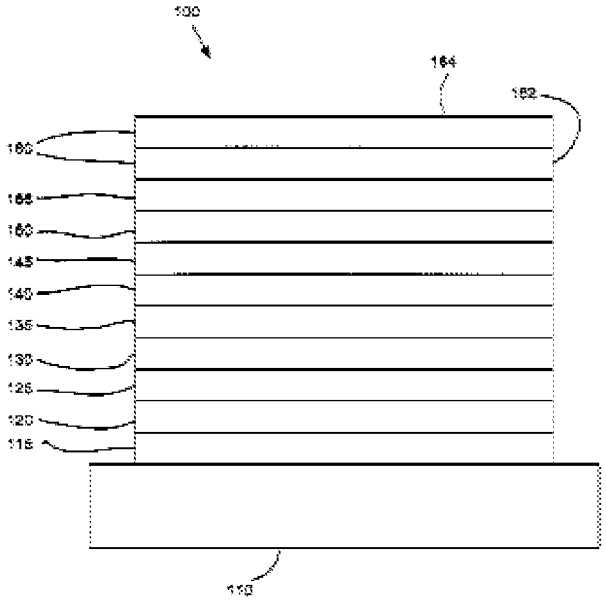


wherein a dotted line "-----" represents a covalent bond with the above M; and T^1 to T^4 in Ph each independently represents a hydrogen atom, a cyano group, a nitro group, a halogen atom, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms, a substituted or unsubstituted amino group, a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, a substituted or unsubstituted alkylsilyl group having 1 to 20 carbon atoms, a substituted or unsubstituted acyl group having 1 to 20 carbon atoms, and T^1 and T^2 in OL each independently represents a hydrogen atom, a cyano group, a nitro group, a halogen atom, a substituted or unsubstitued alkyl group having 1 to 20 carbon atoms, a substituted or unsubstituted amino group, a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, a substituted or unsubstituted alkylsilyl group having 1 to 20 carbon atoms, a substituted or unsubstituted acyl group having 1 to 20 carbon atoms or a substituted or unsubstituted aromatic

group having 1 to 30 carbon atoms (see col. 9, line 19 to col. 11, line 53 and Table 1 in cols. 15-18).

In re claim 6, as applied to claim 1 above, **Ma et al.** disclose all claimed limitations including the limitation wherein an organic electroluminescence device which comprises at least one organic thin film layer **155-120** sandwiched between a pair of electrode consisting of an anode **120** and a cathode **160**, wherein the organic thin film layer **155-120** comprises the metal complex compound according to claim 1, which emits light by applying an electric voltage between the pair of electrode **120, 150** (see col. 4, lines 35-44 and FIG. 1).

Figure 1



In re claim 7, as applied to claim 6 above, **Ma et al.** disclose all claimed limitations including the limitation wherein said light emitting layer 155-120

comprises said metal complex compound (see col. 4, lines 35-44 and col. 9, lines 19-46).

In re claim 8, as applied to claim 6 above, **Ma et al.** disclose all claimed limitations including the limitation wherein said organic thin film layer 155-120 comprising the metal complex compound is formed by coating process (see col. 7, line 65 to col. 8, line 18).

Response to Applicants' Amendment and Arguments

4. Applicants' arguments filed on May 14th, 2008 have been fully considered but they are not persuasive.

Applicants contend that the reference, Ma et al. (U.S. Patent 6,687,266), herein known as Ma does not disclose Applicants' claimed metal complex compound having the proviso that when p is 0 and q is 2, the plurality of R^5 do not bond to each other to form a ring structure as recited in currently amended independent claim 1.

In response to Applicants' contention that Ma does not teach or suggest the provisos that when p is 0 and q is 2, the plurality of R^5 do not bond to each other to form a ring structure, Examiner respectfully disagrees.

Applicants' attention is respectfully directed to (col. 9, lines 39-46 and Table 1 in cols. 15-18) where Ma discloses wherein p and q each independently represents an integer of 0 to 3, p + q being 2 or 3; when q is an integer of 2 or greater, the plurality of R^3 may bond each other to form a ring structure; when q is an integer of 2 or greater, the plurality of R^5 may bond each other to form a

ring structure. Thus, Ma discloses the same conditions as required by the Applicants' claimed invention such that when p is 0 and q is an integer of 2 or greater, p + q being 2, the plurality of R^5 may not bond each other to form a ring structure.

For this reason, Examiner holds the rejection proper.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHIEM D. NGUYEN whose telephone number is (571)272-1865. The examiner can normally be reached on Monday-Friday (8:30 AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Khiem D. Nguyen/
Examiner, Art Unit 2823

/K. D. N./
Examiner, Art Unit 2823